

Attachment H

**Performance and Unit Cost Assumptions for Potential (New) Capacity
from Conventional Fossil Technologies in v. 2.1.6**

For v. 2.1.6, cost and performance parameters for potential conventional pulverized coal, integrated gasification combined cycle, combined cycle, advanced combined cycle, and combustion turbine units were updated based on AEO 2003. The cost and performance parameters for all other types of potential units (i.e., advanced nuclear, renewable generating technologies, and fuel cells) are the same as in v.2.1. For details see sections 4.4.2 and 4.4.3 in “Documentation of EPA Modeling Applications (V.2.1) Using the Integrated Planning Model” at www.epa.gov/airmarkets/epa-ipm.

The following table shows the cost and performance assumptions that were updated in v.2.1.6.

Table H1. Performance and Unit Cost Assumptions for Potential (New) Capacity that was Updated in v.2.1.6

	Conventional Pulverized Coal	Integrated Gasification Combined Cycle	Combined Cycle	Advanced Combustion Turbine	Combustion Turbine
Size (MW)	400	428	400	120	160
First Year Available	2010	2010	2010	2005	2005
Lead Time(years)	4	4	3	2	2
Vintage #1 (years covered)	2010 & after	2010 & after	2010 & after	2005-2009	2005-2009
Vintage #2 (years covered)	—	—	—	2010 & after	2010 & after
Availability	85%	87.7%	90.4%	92.3%	92.3%
Assumed emission controls	Scrubber, SCR	SCR	SCR	None	None
Vintage #1					
Heat Rate (Btu/kWh)	8,689	7,378	7,056	9,384	10,930
Capital (\$/kW)	1,288	1,443	532	465	412
Fixed O&M (\$/kW/yr)	23.46	32.26	11.73	7.82	9.78
Variable O&M (\$/Mwh)	2.94	1.95	1.95	2.94	3.91
Vintage #2					
Heat Rate (Btu/kWh)	—	—	—	8,550	10,450
Capital (\$/kW)	—	—	—	394	405
Fixed O&M (\$/kW/yr)	—	—	—	7.82	9.78
Variable O&M (\$/Mwh)	—	—	—	2.94	3.91

Notes: (1) "Size" values shown in the table indicate the capacities of the units that were used in AEO 2003 in deriving the indicated cost and performance characteristics. They do not represent restrictions on the size of the units that IPM is able to build. (2) "Capital" cost represents overnight capital cost plus interest during construction. (3) "Variable O&M" costs for new units represented here were adjusted to be consistent with VOM cost assumptions for existing units. (4) "Fixed O&M" costs were adjusted to preserve new unit's total O&M. (5) All costs are expressed in 1999\$.